

**§ 1755.507**

**7 CFR Ch. XVII (1–1–06 Edition)**

in the same general location on the building shall be used.

(kk) When two or more aerial service wire runs are required on the same building they shall share the same type of attachment devices.

(ll) Aerial service wire entrances to buildings shall conform to sketch B of construction drawing 510-2 contained in §1755.510, unless the entrance is made through a conduit.

(mm) When the aerial service wire approaches the entrance hole from above, a 1.5 in. (40 mm) minimum drip loop shall be formed in accordance with sketch B of construction drawing 510-2 contained in §1755.510.

(nn) If an entrance conduit which slopes upward from outside to inside is available and suitably located, it shall be used for the aerial service wire entrance.

[66 FR 43317, Aug. 17, 2001, as amended at 69 FR 18803, Apr. 9, 2004]

**§ 1755.507 Aerial cable services.**

(a) Where more than six pairs are needed initially, and where an aerial service is necessary, the service shall consist of 22 AWG filled aerial cable of a pair size adequate for the ultimate anticipated service needs of the building. The cable shall comply with the

requirements of §1755.390, RUS specification for filled telephone cables, and shall be RUS accepted or RUS technically accepted.

(b) Aerial cable services shall be constructed in accordance with specific installation specifications prepared by the RUS borrower or the engineer delegated by the borrower.

(c) Unless otherwise specified in the installation specifications, aerial cable service installations shall meet the following requirements:

(1) Strand supported lashed construction shall be used.

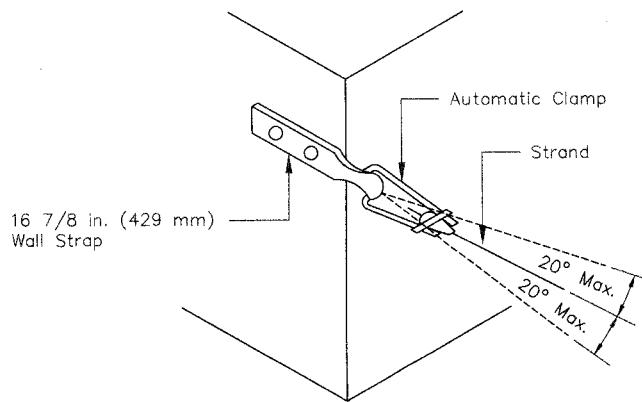
(2) Where practicable a  $\frac{5}{16}$  in. (8 mm) utility grade strand and automatic clamps shall be used in slack spans to avoid damage to the building.

(3) Construction on poles shall comply with applicable construction drawings for regular line construction. Aerial service cable shall be spliced to the main cable in accordance with §1755.200, RUS standard for splicing copper and fiber optic cables.

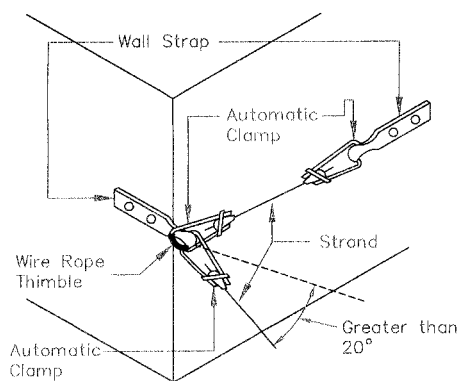
(4) Where practicable, aerial cable shall pass under electrical guys, distribution secondaries, and services.

(5) The suspension strand shall be attached to the building by wall brackets as indicated in Figure 7 as follows:

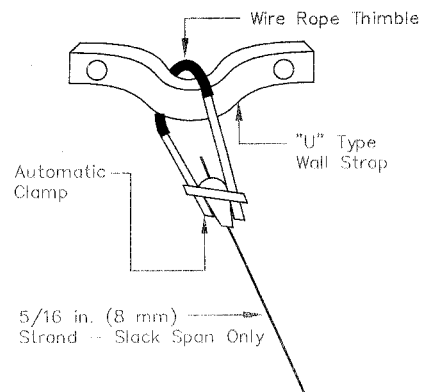
FIGURE 7  
SUSPENSION STRAND DEADENDING ON BUILDINGS



SKETCH A: PULL ALONG LINE OF BUILDING WALL



SKETCH B: ANGLE PULL FROM BUILDING WALL



SKETCH C: PULL FROM FACE OF WALL

(i) If taut spans are necessary, appropriate size strand may be used if the pull is in line with one wall of the building, or within 20 degrees of being in line as illustrated in sketch A of Figure 7. If the angle of pull is greater than 20 degrees from the building, the wall bracket shall be reinforced against pullout by an arrangement

equivalent to sketch B of Figure 7. Taut spans may be strung using the recommendations in RUS Bulletin 1751F-630, Design of Aerial Plant. The same tension as would be used in normal line construction so as not to exceed 60 percent of the breaking strength of the strand under maximum loading shall be used. Taut spans shall

not exceed 100 ft (30.5 m) in length and the cable weight shall not exceed 1 pound/foot (lb/ft) [1.5 kilogram/meter (kg/m)] except when equivalent combinations of greater span lengths with cable weight less than 1 lb/ft (1.5 kg/m) are permissible. Copies of RUS Bulletin 1751F-630 are available upon request from RUS/USDA, 1400 Independence Avenue, SW., STOP 1522, Washington, DC 20250-1522, FAX (202) 720-4120.

(ii) When an attachment must be made to the face of a building wall away from a corner, a “U” type wall bracket shall be used as indicated in sketch C of Figure 7. Only slack span construction with  $\frac{5}{16}$  in. (8 mm) utility grade strand shall be permitted in this situation. The bail of the automatic clamp shall be protected by a wire rope thimble.

(6) Aerial cable shall be located on the rear or side of the building and shall be run only in a horizontal or a vertical direction. The cable route shall be selected so as to avoid building projections and obstructions to the extent practicable.

(7) Cable attachment devices shall be located on solid masonry or on studs of wood frame buildings. Cable attachment devices may be installed on sheet surface materials only when such materials are reinforced with a backing material which allows penetration and firm holding of the attachment devices through the backing material.

(8) The minimum separation on or in buildings between cable and other facilities shall be as indicated in § 1755.505(f)(8), Table 1.

(9) On horizontal runs, cable clamps shall be placed so that the attachment is below the cable. On vertical runs, cable clamps shall be placed so that the attachment is on the same side as horizontal runs. Cable clamps shall be placed on the inside of cable bends.

(10) On horizontal runs, cable clamps shall be placed not more than 16 in. (400 mm) apart for cable diameters equal to or greater than 1 in. (25.4 mm) and 24 in. (600 mm) apart for cable diameters less than 1 in. (25.4 mm).

(11) On vertical runs, cable clamps shall be approximately 24 in. (600 mm) apart for all sizes of cable.

(12) For the cable entrance, holes shall be bored slightly larger in diame-

ter than the cable and shall slope upward from outside to inside. A duct sealer having RUS acceptance or RUS technical acceptance shall be applied to both ends of the hole after the cable is pulled in.

(13) Section 1755.505(g) and (h) shall also apply to aerial cable services.

[66 FR 43317, Aug. 17, 2001]

**§ 1755.508 Customer access location protection.**

(a) All customer access locations shall be protected.

(b) Customer access location protection shall consist of installing the telecommunications facilities with proper clearances and insulation from other facilities, providing primary voltage limiting protection, fuse links, NIDs, BETs, or fused primary station protectors, if required, and adequate bonding and grounding.

(c) All NIDs shall be RUS accepted or RUS technically accepted or the RUS borrower shall obtain RUS regional office approval on a case by case basis as applicable.

(d) All BETs shall be RUS accepted or RUS technically accepted.

(e) All fused primary station protectors shall be RUS accepted or RUS technically accepted.

(f) NIDs, BETs, or fused primary station protectors shall be mounted outside for all applications except for those described in paragraphs (g)(1) through (g)(3) of this section.

(g) NIDs, BETs, or fused primary station protectors may be mounted inside when:

(1) Large buildings are to be served and the customer requests an inside installation;

(2) Buried alarm circuits are requested by the subscriber; or

(3) The customer requests an all buried installation for appearance or to prevent the drilling of holes in aluminum or vinyl siding.

(h) Outside mounted NIDs, BETs, or fused primary station protectors shall be easily accessible and shall be located between 3 to 5 ft (1 to 1.5 m) above final grade.

(i) The locations of NIDs, BETs, or fused primary station protectors shall be selected with emphasis on utilizing the shortest primary station protector